

REQUEST FOR A SPECIAL PROJECT 2012–2014

MEMBER STATE: EC JRC...

Principal Investigator¹: Frank Dentener ...

Affiliation: EC JRC.....

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Other researchers: Elisabetta Vignati
Julian Wilson
Postdoc (mn)

Project Title: Pollution in world regions: Source Receptor calculations with the with the global atmospheric chemistry transport model TM5

If this is a continuation of an existing project, please state the computer project account assigned previously.	SP _____	
Starting year: <small>(Each project will have a well defined duration, up to a maximum of 3 years, agreed at the beginning of the project.)</small>	2012	
Would you accept support for 1 year only, if necessary?	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>

Computer resources required for 2012-2014: <small>(The maximum project duration is 3 years, therefore a continuation project cannot request resources for 2014.)</small>	2012	2013	2014
High Performance Computing Facility (units)	180000	200000	220000
Data storage capacity (total archive volume) (gigabytes)	450	470	490

*An electronic copy of this form **must be sent** via e-mail to: special_projects@ecmwf.int*

Electronic copy of the form sent on (please specify date):
.....30.06.2011.....

Continue overleaf

¹ The Principal Investigator will act as contact person for this Special Project and, in particular, will be asked to register the project, provide an annual progress report of the project's activities, etc.

Principal Investigator: ...Frank Dentener.....

Project Title: Pollution in world regions: analysis of past-trends with sensitivity simulations.

Extended abstract

It is expected that Special Projects requesting large amounts of computing resources (500,000 SBU or more) should provide a more detailed abstract/project description (3-5 pages) including a scientific plan, a justification of the computer resources requested and the technical characteristics of the code to be used. The Scientific Advisory Committee and the Technical Advisory Committee review the scientific and technical aspects of each Special Project application. The review process takes into account the resources available, the quality of the scientific and technical proposals, the use of ECMWF software and data infrastructure, and their relevance to ECMWF's objectives. - Descriptions of all accepted projects will be published on the ECMWF website.

This SP is the follow up of SP JRCSRC. Within SP JRCSRC the focus was on creating a set of worldwide Source Receptor emissions sensitivity Relationships, which were used in various assessments, such as the Global Energy Assessment, and the UNEP assessment on Black Carbon.

Within the proposed project the TM5 model will be run in a hind-cast mode (contributing to projects such as PEGASOS and IGAC ACC), using the newest EDGAR4.2 emissions and era-interim re-analysis, and be further analyzed to account for a range of uncertainties in emission inventories and their impact on global air pollutions.